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ABSTRACT

This review of academic programming considers changes that have occurred as a reaction to real or perceived shifts in institutional and social conditions and values, program design, and program approval, review, and evaluation. Among the conditions influencing programming decisions in the late 1970s are open-access policies, affirmative-action policies, the new majorities of part-time and female students, the demand for noncredit and nontraditional educational opportunities, developments in collective bargaining, and geographic duplication of degree program. The curriculum for American undergraduates typically contains three components: general education, the major concentration, and electives. It is shown that the undergraduate career is now divided almost equally among these three components, and that a growth in elective-taking has been at the expense of the general education component. Curricula have been redesigned to serve the increasing body of adult students, since the number of traditional-age college students has been declining. Program approval refers to a state agency's giving permission to an institution to offer a program. Program review involves analysis of an institution's existing programs, by a state agency, by the institution itself, or possibly by an accrediting group. In practice these terms often are used interchangeably. Publications and studies in various states on program review, approval, and evaluation are cited. A bibliography is included. (SW)

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RESEARCH CURRENTS

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ACADEMIC PROGRAMMING

S. V. Martorana and Eileen Kuhns

Academic programs are intended to be goal-oriented sets of educational experiences, usually credit courses, leading to a specific degree in a designated field. Academic programming involves the design, approval, review and evaluation of academic programs. Thus, academic programming is a process, while the academic program is its product.

Typically, academic programming is a reaction to perceived changes in social and institutional conditions and values (as opposed to being a deliberate effort by educational decision-makers to effect change through design of curricula) and thus is subject to "culture lag" (Ogburn, 1927); that is, it represents a somewhat delayed response to apparent shifts in priorities, especially those related to technology, the economy, and cultural values.

Among the newer conditions and values influencing programming decisions in the late 1970s are: (1) open-access policies that have attracted many "new" and poorly prepared students into college; (2) the reduction in the pool of "traditional" students, which has adversely affected enrollments in some institutions and some disciplines; (3) affirmative-action policies; (4) the new majorities of part-time and female students; (5) the increasing demand for noncredit and nontraditional educational opportunities (6) the overproduction of graduates relative to job opportunities in some fields; (7) developments in collective bargaining that tend to emphasize adversary rather than collegial relations and to result in increased personnel costs; (8) geographic duplication of degree programs; (9) the "taxpayers' rebellion," as evidenced by the passage of Proposition 13 in California; and (10) inflation-fed pressures to review resource allocation for all services (protection and welfare as well as education).

This paper concentrates on changes in academic programming as a reaction to these and other real or perceived shifts in conditions and values, which together constitute the environment in which academic programming decisions are made.

PROGRAM DESIGN

The curriculum for American undergraduates typically contains three components: (1) general education, comprising courses in advanced learning skills like languages and mathematics; breadth or field distribution courses involving a sampling of courses in the natural sciences, the social sciences, and the humanities; and integrative courses addressing broad issues; (2) the major concentration; and (3) electives (Carnegie Foundation, 1977; Levine, 1978).

The undergraduate career is now divided almost equally among these three components (Blackburn et al., 1976). Ten years ago, electives constituted only about one-quarter of the undergraduate curriculum, but this component has grown, primarily at the expense of the general education component. In fact, students seem to be using their "free" electives not to broaden their perspectives in other areas, but to bolster their major concentration (Blackburn et al., 1976), perhaps because they believe this will improve their chances in a tight job market (Levine, 1978, p. 44). Liberal arts colleges are most permissive in their requirements, allowing their students to take about 50 percent of their degree credits in elective courses (Carnegie Foundation, 1977, p. 92).

On the basis of a comprehensive review of the American undergraduate curriculum, the Carnegie Foundation for the Advancement of Teaching concluded: "General education is now a disaster area. It has been on the defensive and losing ground for more than 100 years" (1977, p. 11; Levine, 1978). Harvard's recent highly publicized reaffirmation of general education may mark the beginning of a new era, but it is still too early to tell (Coughlin, 1978).

Open-access policies have affected the curriculum in that compensatory education courses have been added to the curriculum for the benefit of those students unprepared for college-level work in essential subjects (Cross, 1976). An analysis of the catalog materials of 270 institutions revealed that, in 1976, 83 percent of the two-year institutions and 54 percent of the research universities offered credit courses in reading, basic writing, and arithmetic (Levine, 1978, p. 68).

Competitive institutions, such as relatively nonselective liberal arts colleges, are most likely to develop nontraditional and experimental programs, a tendency that suggests curricular innovation may be a byproduct of an institution's will to survive. But such innovation may to some extent be self-defeating, in that student-centered learning plans—e.g., Keller's personalized instruction, Postlethwait's audio-tutorial arrangements, competency-based instruction (Cross, 1976; Trivett, 1975)—may exact a heavy toll from dedicated staff (Carnegie Foundation, 1977, p. 78).

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This concern raises a question in connection with graduate students: Should the faculty member focus on working with students and enhancing the climate for learning or on doing scholarly work and fostering the student's research skills? (Sample, 1972; Council of Graduate Schools, 1976). The way a particular departmental faculty answers this question will be reflected in the curriculum, though more so at some institutions than others. The faculty's control over curricular matters tends to diminish as one moves down the continuum of the Carnegie Commission's institutional classifications, from research institutions to two-year colleges (Baldridge et al., 1977).

Berquist points the way to the future through curricular reform, adding, however, that we need to set a target date (for example, the year 2000) and to focus on "transformational skills," the very absence of which is "the primary source of our pessimism concerning the future" (1976, p. 22).

"Notable Improvements in American Undergraduate Teaching," a *Change* magazine series directed by Richard Meeth, takes a more optimistic view in its reports of over 100 actual learning experiences. Each issue usually covered one social science, one hard science, and one humanistic discipline (see "Report on Teaching . . . ," March 1976 through August 1978).

For a number of years curriculum studies were eclipsed by a concern with management, planning, governance, and the like, though a number of writers "kept alive the traditional issues such as general education;" curriculum studies have now "reappeared as a priority topic in the literary lists of higher education" (Toombs, 1978, p. 18). Using a schema that features content, context, and form, Toombs offers a rationale for curriculum analysis based on the concept of design as opposed to formal curriculum theory.

As the pool of traditional-age college students shrinks, institutions of all types have turned their attention to "new" clienteles, with the adult learner as the prime focus in the following publications: Atelsek & Gomberg, 1977; Heffernan, Macy, & Vickers, 1977; Howe, 1977; Ray, 1977; Gross, 1977; Nyquist, Arbolino, & Hawes, 1977.

Both labor unions (Jacobson, 1977) and management (Lusterman, 1977) have joined this effort to serve adult learners, as is evidenced by the *National Guide to Credit Recommendations for Noncollegiate Courses* (American Council on Education, 1978), which lists credit recommendations for over 500 courses offered by more than forty organizations, evaluated in site visits to eighteen states. In another effort to serve adults (in this case the elderly), a number of states and their institutions offered Elderhostel programs (short-term, low-cost, college-level programs taken in residence) in the summer of 1978 (State of Pennsylvania Department of Education, 1978a).

PROGRAM APPROVAL, REVIEW, AND EVALUATION

Program approval refers to a state agency's giving permission to an institution to offer a program; in New York this approval is termed "registration." In contrast, *program review* involves analysis of an institution's existing programs, by a state agency, by the institution itself, or possibly by an accrediting group. The process used for these determinations is one form of evaluation (Barak, 1977; Dressel, 1975; Rudnick, 1976; Anderson and Ball, 1978; Mingle, 1978).

In practice the terms *program review* and *program evaluation* often are used interchangeably. The criteria for analyzing new and existing programs are becoming more alike, presumably because the two must now compete for the same financial and other resources (Lee & Bowen, 1975, pp. 46-47). Barak and Berdahl, in an in-depth study of state-level program review, used two sets of criteria for their state-by-state analysis of procedures for new and existing programs (1977). Rudnick notes that "the differences between the review of new programs and that of existing programs become insignificant" (1976, p. 16).

The state case studies now available (Barak, 1977; Shirley and Volkwein, 1978; Mingle, 1978) indicate both differences and similarities in review criteria. Summarizing the approaches taken in several southern states and in New York, Mingle identifies two distinct types of review: "quantitative ones concerned primarily with degree productivity; and qualitative ones concerned with a broader set of criteria—duplication, efficiency, need and effectiveness" (1976, p. 52). Barak notes that degree productivity as the only criterion for determining programs that would be studied has been questioned and modified in Florida (1977, p. 81).

Control over courses and degree programs is so central to the traditional faculty role that until very recently few believed that this prerogative would be seriously challenged. As Rudnick points out, in 1971 Berdahl said that "centralized agencies rarely will seek or exercise the power to 'reallocate and eliminate' a program, particularly because they have recognized that extensive political repercussions and controversies would be a likely outcome of such involvement" (Rudnick, 1976, p. 36). Events of the last few years—particularly in New York, Florida, and Louisiana—however, indicate otherwise (Barak, 1977; Mingle, 1978).

In Louisiana the review process began with duplicated programs and then proceeded to unduplicated ones, used self-study reports prepared by the institutions, and included qualitative evaluations conducted by visiting consultants from outside the state. By the end of 1977, the Board of Regents had made decisions on 76 doctoral programs, with the tally thus far being "20 terminations, 48 programs to be 'maintained and strengthened,' and eight programs awarded a special commendation of excellence" (Mingle, p. 59; Eighteen Doctoral . . . , 1976). At least one doctoral program was terminated at each institution granting this degree.

The New York experience with program review and resulting terminations included a request from SUNY system administrators for a state supreme court opinion, which was resolved in 1977 in favor of the Regents (Barak, 1977, p. 86).

In summer 1977, the co-authors sent to each State Higher Education Executive Officer (SHEEO) a letter/questionnaire asking for an update on the state's activities relative to academic programming. Members were asked to indicate which of the following described their programming activity: (1) preparing statewide program inventory; (2) conducting systematic program reviews; (3) making a comprehensive analysis of the state's programs in relation to their settings, taking into account the existence of like programs nearby, population density, student and manpower demand, and so on. Of the 37 states responding, only one did not check at least one level of program activity. The

third type of programming activity—comprehensive analysis of programs in relation to their settings—was checked by 18 of the 37 states (Martorana and Kuhns, 1977). Giving added weight to these findings, at the SHEEO 1977 summer meeting, when participants were asked what information, knowledge, or skills they hoped to gain from the workshop, and what kinds of special expertise they brought that they might share with participants, almost all of them included "program review" as an answer to one or the other of these questions (Rabineau, 1977).

Academics tend to be anxious about such developments. Yet as one of the SHEEO members, T. Edward Hollander (New Jersey's Chancellor for Higher Education), pointed out, state government in the long run "might well be higher education's strongest hope for freedom from excessive entanglement with federal bureaucracies" (1978, p. 44).

A comprehensive study of all 5,375 degree programs in Pennsylvania in 1975-76 was the first (and perhaps the last) massive effort by cooperating institutions to take the initiative for program review themselves. With funding from Buhl, Carnegie and Lilly Foundations, this project (directed by the co-authors of this paper) began with the program inventory already prepared by the State Department of Education. Using a unique model designed for this purpose, the study proceeded to identify and describe geographically coexisting programs, drawing on basic HEGIS information as well as institutional data.

Using distance criteria that varied with the degree level (for instance, 30 miles for an associate degree, statewide for the doctorate), an index of geographic coexistence was developed for each of the 3,943 programs which was subsequently "paired" with another program at the same degree level. Some institutions located close to similar institutions (for example, two liberal arts colleges) found that almost all of their programs were paired and thus the subject of more intensive review through the questionnaire developed for paired programs. The institutions responsible for this universe of paired or geographically coexisting programs were then sent a questionnaire asking for information about the institutional setting, program objectives, admission requirements, faculty, majors, credit distribution, instructional characteristics, degrees conferred, and institutional impact of the program. In general, institutions with established data systems found the review process easier than those who were dependent on manual accounting procedures to determine, for example, student credit hours within and beyond the major concentration, faculty load, and compensation. Considering the task involved, the response rate was remarkably high (Kuhns and Martorana, 1977, p. 20). Of the 226 institutions (public, private, proprietary) included in the study, 201 or 89 percent had one or more paired programs; 79 percent of these institutions responded with one or more questionnaires.

The technical report (Kuhns and Martorana, 1977) of this study contains some 200 tables showing relationships among the key variables. In the model, eight indices were developed from the HEGIS and questionnaire data, including the already mentioned index of geographic coexistence, two indices of student demand, manpower demand, institutional need, graduate production, availability, and similarity of paired programs.

The most appropriate role for the various participants in the review process is still under discussion. In his latest work on program review, Barak develops a comparison matrix that includes both new and existing programs (1977, p. 2). Following Lee and Bowen (1971), Rudnick maintains that review criteria are of two generic categories: quality and appropriateness. The institution is responsible for quality whereas the centralized agency must assess appropriateness in terms of both institutional mission and statewide educational and financial resources (1976). In 1975 Rudnick sent a letter/questionnaire to academic program officers serving with the central administrations of multicampus systems or with state coordinating agencies. One of the questions was, Who makes the final decision about a program being reviewed? Returns showed that a lay board "always makes the final decision," but with assistance from professional staff and often from an academic or planning subcommittee as well. He indicates that the use of such subcommittees appears to be increasing (p. 96).

Shirley and Volkwein, New York state administrators, believe that decisions about evaluating and setting priorities among academic programs should be made at the campus level "within the context of an overall academic planning process which involves faculty, students, and administrators" (1978, p. 25). Their paper gives detailed procedures for reviewing programs on the criteria of quality, need, and cost, to make one of several program decisions, including not only termination but also the possibility of shifting resources "to facilitate attainment of national leadership in those programs which are at or near that level of quality already" (p. 24).

Comparative techniques for assessing quality in graduate education are the subject of a recent publication by the Council on Graduate Education (1976). This useful pamphlet summarizes the multidimensional approach developed by Clark, Harnett, and Baird (1976; Clark, 1976). As with the Pennsylvania study, these procedures are especially valuable when a number of institutions wish to assess similar programs (Council . . . 1976, p. 20).

Contrary to the impression given by the title, *The Profession and Practice of Program Evaluation* is not about the academic program per se (Anderson and Ball, 1978). The authors define *program* as "a sponsored activity, more often than not from public funds, aimed at mitigating a social or economic problem or improving social and economic welfare" (p. 2). Nonetheless, they provide a valuable framework for analyzing both proposed and existing programs. Six major purposes for evaluating programs, as defined, are identified, three of them especially appropriate for academic programming: (1) to contribute to decisions about program installation (which, following Harless, the authors label "front-end analysis"); (2) to contribute to decisions about program continuation, expansion, or "certification," and (3) to contribute to decisions about program modification (pp. 3-4). Paul Dressel's *Handbook on Academic Evaluation* (1976) relates more directly to programming as defined in this paper, and includes a chapter on statewide coordination and planning. Mingle notes that Dressel recently served as external evaluator for programs undergoing review in Kentucky (1978, p. 68).

The political role of the evaluator is explored by Wergin, who suggests that evaluation should contribute to policy directions. The evaluator may do this "by isolating probable future consequences, not by validating past events . . . evaluation research can become very potent in effecting needed changes by including policy making within its purview" (1976, p. 77).

Interest in questions of academic programming has been consistent over the last three years at the annual meetings of the Association for Institutional Research (Nichols, 1977; Perry, 1977; Martorana & Kuhns, 1978; LeLong et al., 1978). In addition, regional accrediting agencies are evidencing interest in a related type of program review, that concerned with nontraditional degrees and formats (Thrash, 1975).

The present state of the nation's academic program design, approval, review and evaluation activities can be likened to a theatrical production in its early rehearsal stages: The roles have been more than tentatively assigned, but the actors are still jockeying for position and attempting to upstage one another.

In this case the "actors" are the faculty members, campus and multicampus administrators, state agency personnel, members of lay boards and their subcommittees, legislators, governors, representatives of accrediting agencies, and others who may vary depending on the particular state. As with most productions, the audience (students and other consumers and the general public) play a more important role than they realize. Their perceptions—about the quality and value of higher education, its personal and social utility, and the level of resources that should support particular programs at particular institutions—will provide the ultimate evaluation of program design and review efforts being carried out by the active participants in these activities.

Where decisions about programming will be made is a policy question and in the process of resolution around the country (Rudnick, 1976; Barak, 1977; Kuhns & Martorana, 1977; Mingle, 1978; Shirley & Volkwein, 1978). As Barak notes, "we all stand to lose when evaluations are hastily planned and poorly developed, because such reviews can severely damage the quality of higher learning" (1977, p. 90).

In the last analysis it will be the larger public's response to educators' decisions about academic programs and programming that will determine what the future holds in these realms. That assessment is taking shape at this time but as yet is not fully defined. Currents of change are real and cannot be denied. It may be possible, however, to guide and direct them. If academic leadership neglects this effort, it will be acting at the risk of losing control of the heart of higher education, its curriculum.

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